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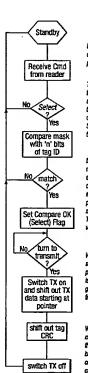
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(54) Title: A METHOD AND SYSTEM FOR CALCULATING AND VERIFYING THE INTEGRITY OF DATA IN A DATA TRANSMISSION SYSTEM



is the command a 'select' command containing a mask

The tag clocks its TX shall register together with the incoming mask data and performs a bit by bit comperison of the tag ID and the mask for "II bits as detarmined by the mask length. Simultaneously the ID is shilled through the tag CRC generator

The reader celculates the first portion of the CRC based on the mask value transmitted to the tag in the select command.

If the mask and in bits of the lag ID match han the lag sets its Salected day and eath from the mant and eath for it was for the state of electrical by the system entitletion electrical. A pointer indicates the position of the med bit in the larg memory following the last bit compared. The CRC generator relates its current value.

When it is the tag's turn to transmit it starts its transmission from the bit position indicated by the pointer. The ID is standarmously stailed fraction the CRC generator, the CRC generator continues from its last position without resecting.

When the last ID bit is shilled out of larg memory the larg suitches to shilling out the CRC bit. When the last CRC bit has been shilled out the TX michaes of completing the maphy cycle. The CRC is calculated over the complete larg ID stored in memory were though only a portion of the ID was undusty. As the reader receives the tag trensmission if continues from where it left oil, calcutating the CRC on the brooming message

Once the reader has received the title last massage bit from the tag it compares the CRC transmitted by the tag with the CRC prevailed in the reader from the massic value transmitted by it and the data stream received from the tag.

(57) Abstract: A method is described of calculating and verifying the integrity of data in a data communication system. The system typically comprises a base station and one or more remote stations, such as in an RFID system. The method includes transmitting a select instruction from the base station to said one or more remote stations, the select instruction containing a data field which matches a portion of an identity or other data field in one or more of the remote stations; transmitting from a selected remote station or stations a truncated reply containing identity data or other data of the remote station but omitting the portion transmitted by the base station; calculating in the base station a check sum or CRC from the data field originally sent and the truncated reply data received and comparing the calculated check sum or CRC with the check sum or CRC sent by the remote station. A system and transponder is also described.

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